Appln. No.: 10/031,120 Docket No.: 66722-012-7

Amdt. Dated Feb. 16, 2006 Reply to Office Action of 11/16/2005

N THE CLAIMS:

1. (Currently Amended) A method for canceling feedback in an acoustic

system comprising a microphone, a signal path, a speaker, means for

detecting presence of feedback between the speaker and the microphone,

and filter means for compensating at least partly a possible feedback

signal, the method comprising:

[-] using a LMS algorithm for generating filter coefficients;

[-] using a highpass filter to prevent low-frequency signals from entering

the LMS algorithm;

[- where the] using an additional feedback cancellation filter and a noise

generator [is used] for providing low-frequency input for the LMS

algorithm.

2. (Currently Amended) A method according to claim 1, where a sign-

swapping algorithm is used for generating a broad band noise signal[,]

having an amplitude substantially equal to the amplitude of the signal

from which it was derived.

3. (Currently Amended) A method according to any of the claims 1 or

<u>claim</u> 2 where a steep low pass filter is used to generate a low-frequency

noise signal to be used as an additional input to the LMS algorithm.

4. (Currently Amended) A method according to claim 1, where the LMS

algorithm operates with a predetermined essentially level independent

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adaptation speed when feedback is not present, this representing a first

[-] where the LMS algorithm operates <u>at a level dependent adaptation</u>

speed when feedback is present, this representing a second mode;

[-] where the means for detecting the presence of feedback is used to

control the adaptation mode selection of the LMS algorithm; and

[-] where the update rate adaptation speed for the LMS algorithm is

determined by [the] a long-term average of a denominator in the LMS

update algorithm in the second mode.

5. (Currently Amended) A method according to any of the claims 1-4

claim 4, comprising a microphone, a signal path, a speaker, means for

detecting presence of feedback between the speaker and the microphone,

and filter means for at least partly compensating a possible feedback

signal, the method comprising:

[-] using a bandwidth detection means for determining the presence of a

feedback signal.

mode

6. (Currently Amended) A method according to any of the claims 1-5

claim 5, where the stability of the signal determined as a feedback signal

is analyzed.

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7. (Currently Amended) A method according to any of the claims 1-6

claim 6, where the feedback analyzing comprises holding flag values from a number of succeeding time frames and comparing of these.

8. (Currently Amended) A hearing aid comprising:

- [-] a microphone;
- [-] a signal path;
- [-] a amplifier;
- [-] a speaker;
- [-] means for detecting feedback between the speaker and the microphone;
- [-] filter means for at least partly compensating a possible feedback signal;
- [-] memory means including a LMS algorithm for generating filter coefficients;
- [-] at least one highpass filter for preventing low-frequency signals from entering the LMS algorithm; and
 - [-] an additional feedback cancellation filter and a noise generator for providing low-frequency input for the LMS algorithm.

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9. (Original) A hearing aid according to claim 8, further comprising steep low pass filters for generating a low-frequency noise signal to be used as an additional input to the LMS algorithm.